

Data Sheet

FUJITSU Converged Network Adapter (CNA)

Emulex OCe14102

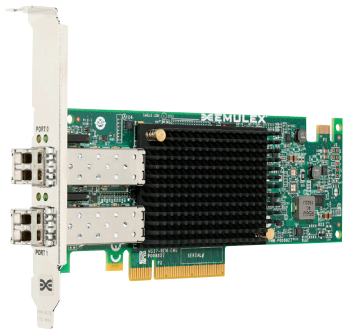
Dual-port 10GbE Converged Network Adapter

A Converged Network Adapter (CNA) is a Network Adapter that supports both the Ethernet and Fibre Channel standards. It provides 10 Gbps connectivity to Ethernet networks and also connects to Fibre Channel storage area networks (SANs) using Fibre Channel over Ethernet (FCoE) and Data Center Bridging (DCB). The adapter consolidates Ethernet data and FCoE storage traffic, reducing the number of cables and adapters needed for a server. The CNA provides 2 independent physical functions per port which can both be used at the same time for FC and Ethernet. Each port of the device provides separate NIC and HBA functions to the operating system or hypervisor. FC and network traffic are transmitted simultaneously over a common cable to a DCB-enabled FCoE switch which segregates Ethernet and Fibre Channel I/O to the appropriate network.

Converged Network Adapter (CNA)
Emulex OCe14102

The Emulex OneConnect Universal CNA OCe14000 family of Ethernet Network Adapters is the FCoE and most advanced generation of Emulex Ethernet adapters. Powered by the XE100 controller, OCe14000 adapters offer enhanced support for virtualization, cloud and hyperscale cluster deployments. This paper highlights support for Emulex's Virtual Network eXceleration initiative that delivers support for Single Root I/O Virtualization, Universal Multi-Channel™ NIC Partitioning and Stateless TCP/IP Offloads amongst its many capabilities.

As a member of the CNA 14000 family, the OCe14102 uses a 10Gbit/s DCB (Converged Enhanced Ethernet) infrastructure for networking and storage, reducing capital expense (CapEx) for adapters, switches and cables, and operational expense (OpEx) for power, cooling and IT administration. The OCe14102 adapter increases data center IT agility and scalability, as well as optimization of the server hardware utilization by scaling high density virtualization. The OCe14102 with 10GbE UCNAs is designed for the high bandwidth and scalability demands of Tier-1 enterprise applications with storage protocol (FCoE and iSCSI) offloads, more scalable virtualization with support for enhanced Single-Root I/O Virtualization (SR-IOV) and NIC port partitioning, and cloud optimization using Overlay Networking technology.



Main Features	Benefits
<ul style="list-style-type: none">■ Superior network scalability - 10GbE bandwidth on common software platform■ RoCE Support■ Powerful Overlay Networking offloads (NVGRE and VXLAN)■ Stateless TCP/IP offloads■ Common technology with Dynamic LoM	<ul style="list-style-type: none">■ Maximizes server hardware ROI with high virtual machine density■ Enables server to server data movement directly between application memory without any CPU involvement providing high throughput on a standard Ethernet■ Accelerates applications performance■ Provides the bandwidth needed for slot constrained server platforms■ Same driver and management support as for LOM on new dual socket M1 server generation

Technical details

Technical details

Controller Silicon	Emulex Engine XE100
Controller type	Converged Network Adapter
Number of ports	2
Data transfer rate(s)	10 Gbit/s
Bus interface	PCIe 3.0 x8
Bus transfer rate	8GT/s
HW Virtualization	SR-IOV support (up to 64 virtual functions per port for NIC) Overlay Network Virtualization (NVGRE & VXLAN) Universal Multi-Channel for Port Partitioning
Interrupt Levels	MSI-X
WoL	No
LEDs	2 LED per port Green: Blink = Activity Off = No activity Amber: On = Link up Off = Link down
Teaming	Yes
Switch fault tolerance (SFT)	Yes
Adapter fault tolerance (AFT)	Yes
Adaptive load balancing (ALB)	Yes
Remote boot support	PXE 2.1 iSCSI FCoE
Remote boot support notes	just one boot function can be enabled at the same time SAN boot (FCoE boot) requires a CNA configuration
Additional Features	prepared for RDMA (RoCE) with future driver release
Offloading	Stateless TCP Storage protocols: iSCSI and FCoE Virtual Network Fabrics (NVGRE & VXLAN)
Standards	Ethernet: - IEEE 802.3-2008 10Gb/s Ethernet ports - IEEE 802.1Q virtual LANs (VLAN) - IEEE 802.3x Flow control with Pause frames - IEEE 802.3ad Link Aggregation / LACP - IEEE 802.1AB Link Layer Discovery Protocol (LLAP) - IEEE 802.1Qbg Edge Virtual Bridging DCE/CEE Support: - IEEE 802.1Qaz Enhanced Transmission Selection (ETS) Data Center Bridging Capability Exchange (DCBX) - IEEE 802.1Qbb Priority-based Flow Control (PFC) Fibre Channel over Ethernet: FC-BB-5 by INCITS Technical Committee T11

Order code	Height of bracket	Type / mode	Number of Connectors	Related product
MC-OJCE61	Low Profile (LP)		2	PRIMEQUEST Server
MC-OJCE62	Full Height (FH)		2	PRIMEQUEST Server
MCXOJCE61	Full Height / Low Profile		2	PRIMEQUEST Server
S26361-F5250-E1	Full Height (FH)		2	PRIMERGY Server
S26361-F5250-E201	Low Profile (LP)		2	PRIMERGY Server
S26361-F5250-L501	Full Height / Low Profile		2	PRIMERGY Server
S26361-F5250-E110		SFP+ / MMF (SWL)		PRIMERGY Server
S26361-F5250-L110		SFP+ / MMF (SWL)		PRIMERGY Server

Supported Interface Modules / Cables

Interface Module notes	Only the above listed Fujitsu certified SFP+ modules are supported Certified Twinax cables are: S26361-F3989-L1xx, S26361-F4571-L1xx, S26361-F3873-L5xx
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Environmental	
Power consumption	max. 15 W
Temperature (operating)	0 - 55 °C
Temperature (not operating)	-40 - 70 °C
Compliance	
Compliance notes	According to the corresponding system
Compliance link	http://globalsp.ts.fujitsu.com/sites/certificates

More information

Fujitsu OPTIMIZATION Services

In addition to Fujitsu with Converged Network Adapter (CNA) Emulex OCe14102, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio

Build on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offering. This allows customers to leverage from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

Computing Products

www.fujitsu.com/global/services/computing/

Software

www.fujitsu.com/software/

More information

Learn more about Fujitsu Converged Network Adapter (CNA) Emulex OCe14102, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website. www.fujitsu.com/fts

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT. Please find further information at <http://www.fujitsu.com/global/about/environment>



**Green
Policy
Innovation**

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FUJITSU LIMITED

Website: www.fujitsu.com
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